

REMARKS

Claims 1-33 are pending. The main independent claims 1 (apparatus) and 16 (method) have been amended to better define the invention. A new claim 34 is added which depends from claim 1. The allowability of the subject matter of claims 18, 26 and 33 is noted.

Claim 18 has been amended to delete one of the occurrences of the phrase "according to". Claim 16 also has been amended to overcome the rejection based on the lack of a sufficient antecedent.

The independent claims 1 and 16 have been amended to set forth a path in the lumen system along which the catheter is to travel, with claim 1 calling for a predetermined path. The path is predetermined and established by a topological representation. There is a medical positioning system including a detector at the distal end of the catheter by which the position of the catheter can be tracked. The controller compares the position of the catheter as it travels with the path produced from the topological representation and automatically operates a moving mechanism to advance the catheter along the path in the correct direction to its final deemed position.

Claims 16, 17, 27-30 and 32 are rejected as being anticipated by Gilboa US 2002/0193686. Claim 16 is the main claim of this (method) group and the other claims depend from it. The Gilboa reference only teaches positioning a catheter at a point of interest. It does not teach the subject method of the invention in which the path that the catheter is to travel is first established and the catheter is automatically moved along the path on a point by point basis, that is, from one position to a successive position until the final position is reached. Claim 16 defines a novel and advantageous method over what is disclosed in Gilboa. Therefore, this claim and the claims that depend from it are patentable and should be allowed.

Claims 1-9 and 11-14 are rejected as being unpatentable over the combination of Strommer et al. 2001/0031919 in view of Ueda USP 5,681,263. The Examiner recognizes that the principal reference to Strommer does not disclose a controller that operates a moving mechanism to

move the catheter to the predetermined location. For this feature the Examiner relies upon the secondary reference to Ueda for the teaching of a moving mechanism in a navigation system used to steer an endoscope or catheter in a human body. In Ueda the catheter 2 had a TV camera at its distal end and also a piece 19 that is magnetically responsive. A magnetic force generating device 31 (Figures 3) is mounted on a pair of transverse rails and device 31 is manually positioned by the use of a joystick (Figure 6). The magnetic force from device 31 reacts with the catheter magnetically responsive piece 19 and moves the catheter. This is totally unlike the invention as set forth in independent claim 1 in which the path is predetermined and the catheter is automatically positioned by the controller operating a moving mechanism with the controller guiding the catheter based upon the difference in signals between the sensed position of the catheter distal end and the predetermined path. No external joystick and an operator for it are required.

Accordingly, claim 1 and its dependent claims define a novel invention which is neither shown nor suggested in the combination of references. Therefore, claims 1-9 and 11-14 are patentable and should be allowed.

Claim 15 is rejected as being unpatentable over the combination of Strommer in view of Ueda and further in view of Masada USP 6,514,237. The latter patent is relied on for teaching a catheter portion made of an electroactive polymer. The combination of this reference with the basic references still does not meet the recitation of the features in main claim 1, from which claim 15 depends. Therefore, this claim also is patentable and should allowed.

Claim 10 is rejected as being unpatentable over the combination of Strommer in view of Ueda and further relying on Plicchi U.S. 2004/0254556. The latter patent is relied on to show a moving mechanism for a catheter. Again, the combination of this reference with the others does not meet the subject matter as set forth in main claim 1, from which claim 10 depends. Accordingly, this claim also is patentable and should be allowed.

Claims 18 and 19-25 are rejected as being unpatentable over the combination of Gilboa and Strommer. These claims depend from main method claim 16. As described above, neither of these references nor the combination of the references teaches or suggests the movement of the catheter along an established path based upon the sensing of a signal that shows the position of the catheter distal end that is compared to the established path and automatically moves the catheter along the path to its final position. Accordingly, these claims also patentably distinguish over the combination of references and should be allowed.

Prompt and favorable action is respectfully requested.

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